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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/330,949	06/11/1999	JURGEN JASPERNEITE	(H)99PH1261U	1052

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EXAMINER	
GEORGE, KEITH M	
ART UNIT	PAPER NUMBER
2663	9

DATE MAILED: 10/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/330,949	JASPERNEITE ET AL.	
	Examiner	Art Unit	
	Keith M. George	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 August 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☒ The proposed drawing correction filed on *25 August 2003* is: a)☐ approved b)☒ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, embedding the data coming from the data link layer into a frame to be transmitted, recited in independent claims 1 and 9, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description:

a. In figure 2, reference sign 76.

A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect may be deferred until after the examiner has considered the proposed drawing correction. Failure to timely submit the proposed drawing correction will result in the abandonment of the application.

Claim Objections

4. Claims 4, 10, 11 and 13 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

a. Claim 4 is identical to claim 3;

b. Claim 10 is identical to claim 5;

c. Claim 11 is identical to claim 6;

d. Claim 13 depends from claim 4 and is identical to claim 12 that depends from claim 3.

5. Claim 9 is objected to because of the following informalities:

a. In line 10 of the claim, "embedding said dta into" should probably read "embedding said data into".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claim 1-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicant claims a layer for

matching a data link layer to a standardized medium-independent interface in independent claims 1 and 9. There does not appear to be any details in the specification as to how a data link layer is matched to a standardized medium-independent interface or what qualifications of a data link layer would be used to match it to a particular standardized medium-independent interface. At the time the invention was made, a person of ordinary skill in the art would not be able to perform the matching task by the information contained in the specification.

Claim Rejections - 35 USC § 103

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 1, 5, 9, 10 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns et al., U.S. Patent 5,970,430, hereinafter Burns, in view of Julyan, U.S. Patent 5,809,249, hereinafter Julyan.

10. Referring to claims 1 and 9, Burns teaches that to implement and perform communication and control activities, the Fieldbus protocol uses three general categories of technology identified as a physical layer, a communication "stack," and a user layer. The physical layer, which corresponds to OSI layer 1, is embedded in each field device and bus and operates to convert electromagnetic signals received from the Fieldbus transmission medium into messages capable of being used by the communication stack of the field device. The communication stack, which is present in each Fieldbus device, includes a data link layer, which corresponds to OSI layer 2, a Fieldbus access sublayer, and a Fieldbus message specification layer, which corresponds to OSI layer 6 (a fieldbus component comprising a data link layer and a physical layer) (column 12,

lines 8-37). Burns goes on to teach that the data link layer converts messages on the communication stack into physical Fieldbus signals and encodes these signals with clock information to produce a "synchronous serial" signal having a proper preamble for transmission on a two-wire bus (matching the data link layer to the physical layer) (column 12, lines 59-63). Burns teaches all of the above with the possible exception of a standardized medium-independent interface that connects the data link layer to the physical layer. Julyan teaches that the OSI Reference Model for communications systems includes a physical layer (column 1, lines 30-34). And in an IEEE 802.3u CSMA/CD LAN implementation of the physical layer, a reconciliation sublayer and a medium independent interface sublayer perform function necessary to interconnect the physical layer with the data link layer (matching the data link layer to the standardized medium-independent interface) (column 1, lines 34-40). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to implement the physical layer of Burns with a reconciliation sublayer and a medium independent interface as taught by Julyan. One of ordinary skill in the art would have been motivated to do this because Burns teaches that the Fieldbus protocol follows the standard OSI model and Julyan is teaching a method of implementing the physical layer of the OSI model to connect the physical layer to the data link layer, which is also a function described by Burns.

11. Referring to claims 6-8, Burns and Julyan teach the system described in reference to claim 1 above and Burns also teaches that data may be sent over the different bus segments at the same or different communication baud rates or speeds according to the Fieldbus protocol. For example, the Fieldbus protocol provides a 31.25 Kbit/s, a 1.0 Mbit/s and a 2.5 Mbit/s communication rate (column 8, lines 33-39 and figure 1).

12. Referring to claims 5, 10 and 14, Burns and Julyan teach the system described in reference to claim 1 above where it was clearly shown that Julyan is teaching an implementation that utilizes IEEE 802.3u (column 1, lines 34-35).

13. Claims 3, 4, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns and Julyan as applied to claim 1 above, and further in view of Witkowski et al., U.S. Patent 5,892,926, hereinafter Witkowski. Burns and Julyan teach the system described in reference to claim 1 above with the possible exception that the data link layer comprises a Media Access Control layer, a basic connection layer, a peripheral data connection layer and a network management layer. Witkowski teaches that according to the IEEE 802.3u standard, the data link layer is divided into two sub-layers, the logical link control (LLC) sublayer at the top and the Media Access Control (MAC) sublayer at the bottom. The LLC sublayer provides an interface for the Network layer protocols while the MAC sublayer provides access to a particular physical encoding and transport scheme of the Physical layer (column 1, lines 56-63). At the time the invention was made, one of ordinary skill in the art would clearly understand that the MAC and LLC sublayer are performing the functions indicated by the Media Access Control layer, basic connection layer, peripheral data connection layer and network management layer. One of ordinary skill in the art would have been motivated to do this because by using an established standard, interoperability with a variety of components that also implement the standard would be possible.

Response to Arguments

14. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Liu et al., U.S. Patent 5,754,540, teaches that the 100BASE-T standard defines a reconciliation sublayer and a media independent interface in OSI reference model physical layer.

b. Feuerstraeter et al., U.S. Patent 6,154,464, teaches a physical layer device having a media independent interface for connecting to either a media access control device or other physical layer devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith M. George whose telephone number is 703-305-6531. The examiner can normally be reached on M-Th 7:00-4:30, every other F 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on 703-308-5340. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

Keith M. George
23 October 2003

CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 10/24/03